REMARKS

The present application has been carefully studied and amended in view of the outstanding Office Action dated September 5, 2003, and reconsideration of the rejection of claims 1-8 is requested for the reasons indicated below.

A petition for a one-month extension of time accompanies this response together with the appropriate fee. Accordingly, the deadline for responding to the Office Action has been extended until January 5, 2004, and this response is therefore timely filed since it was deposited in the mail for First Class Delivery Service on the date certified on the front page hereof.

Claims 1-10 are presently pending in the subject application. It is noted that claims 9 and 10 have been withdrawn from consideration as being directed to a non-elected invention.

Claim 1 has been amended to address the informality noted in the Office Action. As amended claim 1 and the remaining claims are believed to be in proper form and in full compliance with 35 USC §112.

The only substantive issue in the prosecution history of the present application is the obviousness double patenting rejection of claims 1-8 over U.S. Patent 5,908,679. For the reasons expressed below reconsideration of this rejection is requested.

As previously argued, the instant invention is a <u>further development</u> of the pipe described in the U.S. Patent 5,908,679 (" the '679 patent"). Such further development comprises a further improved mechanical strength of a pipe having already an incredible high mechanical strength. Such improvement was highly desirable, but no one had any idea of how such improved strength could be achieved.

Every improvement is strongly related with the starting point from where the improvement begins. Since the pipe in terms of the '679 patent was the strongest pipe on the market and was and is still produced and sold in considerable amounts, it was a very difficult problem to achieve reliably a further improvement in strength.

Nevertheless, skilled practitioners tried all possible methods such as the addition of reinforcing material or the preparation of blends or they used other catalysts and so on, but after all the pipe of the '679 patent made from the bimodal polyethylene still seemed to remain an optimum solution which was impossible to further improve.

Applicants are well aware that the pipe of the instant invention is described in similar terms as the pipe of the prior art and is prepared by a similar process in the presence of the same catalyst. However, the working example demonstrates illustratively how the mechanical strength is actually improved by means of a selection of special parameters such as density of the polymer, chemical composition of the co-monomer introduced into the high molecular mass fraction and the over all molecular mass expressed as the MFI_5 of the polymer mix. Generally, all such parameters are addressed in the patent, however, the artisan actually aware of the '679 patent did not become aware that an improvement was possible by the special selection described and defined in claims 1-8.

The Examiner in rejecting claims 1-8 states that the adjustments made are, in her view, a mere optimization of process parameters wherein the improvements where foreseeable. However, in the absence of any prior art reference cited to support such obviousness, there is no reason to conclude why it was possible to foresee an improvement. Quite the contrary no one having ordinary skill earnestly expected any further improvement.

The present invention involves a surprising step in the right direction. As evident from the examples, the polyethylene of the '679 patent had a density of 0.948 g/cm^3 and a value of MFI_5 of 0.2 dg/mn. The inventors of the instant invention increased the density to a value of more than 0.948 g/cm^3 (see working example on page 9 = 0.950) and simultaneously therewith did decrease the MFI_5 to a value of lower than 0.2 dg/mn (see working example on page 9 = 0.18 dg/mn).

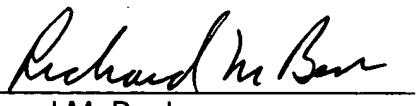
Such variation is the result of all process parameters in combination with one another such as ethylene feed, comonomer feed and hydrogen pressure as specified in Table 1 on page 9.

It is respectfully submitted that this improvement was not foreseeable and the inventors did not have available any prior art reference, wherein they could read any recommendation of what to do. The specification comprises as a comparison example the working example of EP-A 739 937 which is the European counterpart of the '679 patent and the invention demonstrates that an incredible improvement from PE 100 to PE 125 was possible. That is exemplified in the last line in Table 2.

Accordingly, for the reasons expressed above it is believed that claims 1-8 patentabilty distinguish over the claims of U.S. Patent 5,908,679, and this application is therefore believed to be in condition for allowance.

Respectfully submitted,

CONNOLLY, BOVE, LODGE & HUTZ, LLP

By 

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